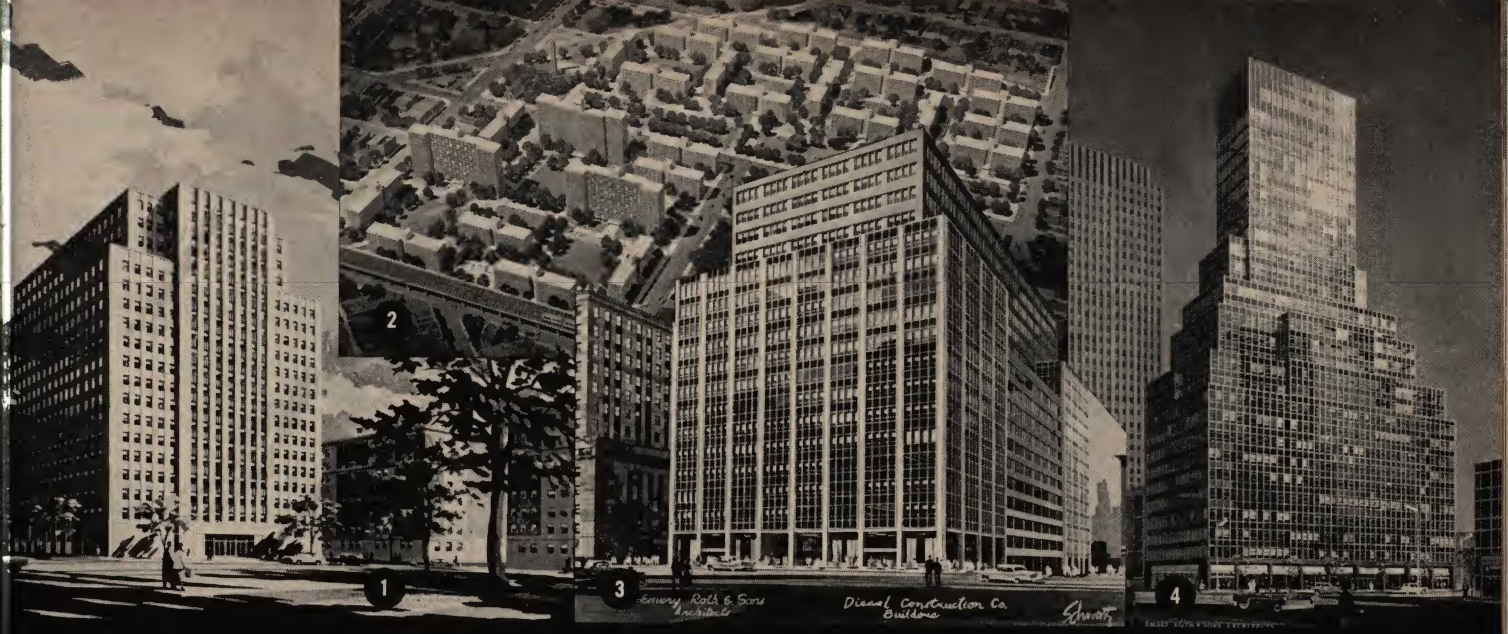
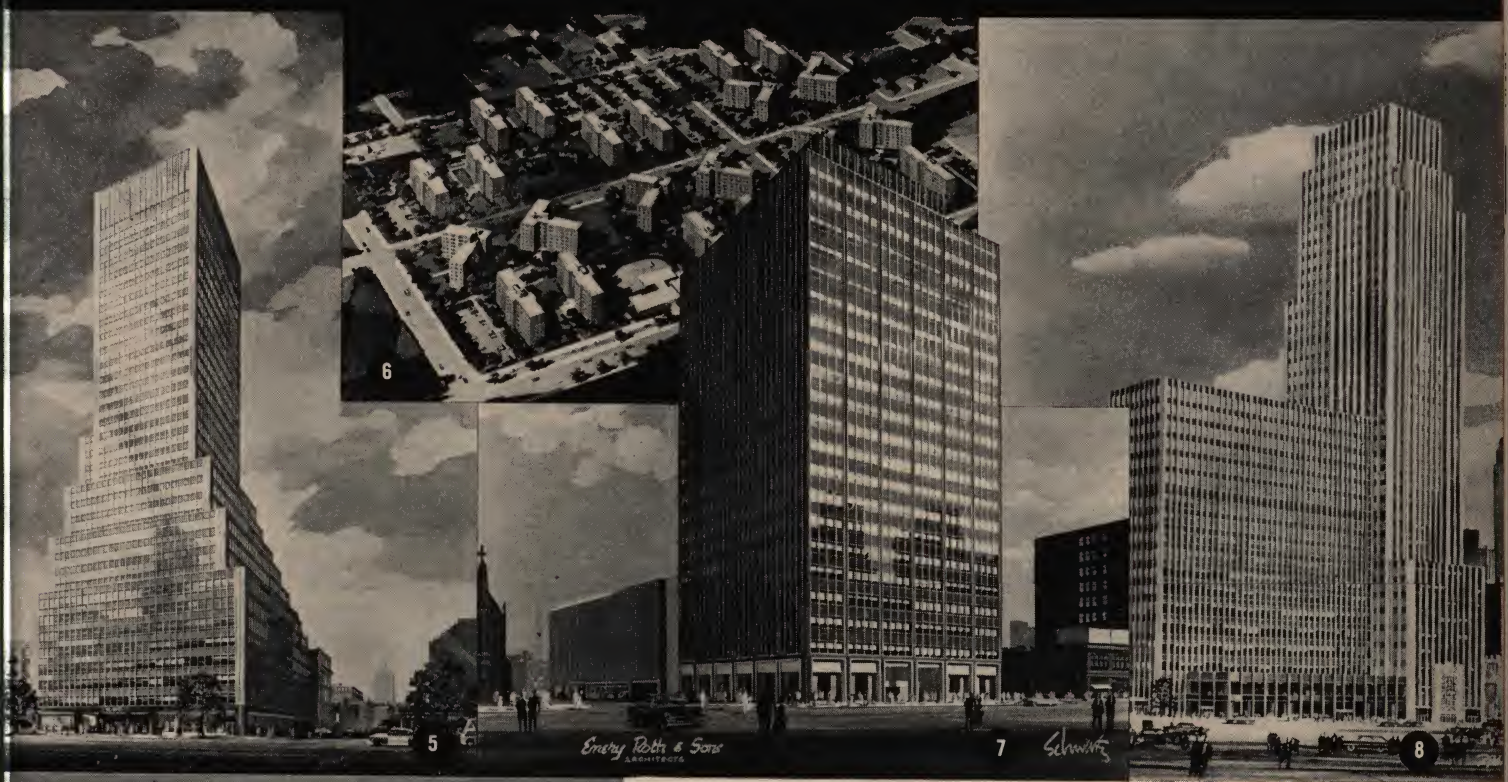


since 1902 **GROSSMAN**

miscellaneous and ornamental iron / steel stairs



current projects:

1. **INTERCHURCH CENTER, New York, N. Y.**
   General Contr: Turner Construction Co.
   Architect: Voorhees, Walker, Smith & Smith
2. **MARLBORO HOUSES, Brooklyn, N. Y.**
   Gen. Contr: Geo. F. Driscoll Co. & Moccia Const. Corp. Architect: Harrison & Abramowitz
3. **100 CHURCH STREET, New York, N. Y.**
   General Contr: Diesel Construction Co.
   Architect: Emery Roth & Sons
4. **200 EAST 42nd STREET, New York, N. Y.**
   General Contr: Diesel Construction Co.
   Architect: Emery Roth & Sons
5. **575 LEXINGTON AVE., New York, N. Y.**
   General Contr: Sam Minskoff & Sons
   Architect: Syivan Bien and Robert Bien
6. **LOUIS HEATON PINK HOUSES, Brooklyn, N. Y.**
   General Contr: C. E. Youngdahl Co. & Psaty & Fuhrman, Inc.
   Architect: Adolph Goldberg
7. **EAST OHIO BUILDING, Cleveland, Ohio**
   General Contr: Tishman Realty & Construction Co., Cleveland, Ohio
   Architect: Emery Roth & Sons
8. **NEWS BUILDING, New York, N. Y.**
   General Contr: Turner Construction Co.
   Architect: Harrison & Abramowitz
9. **PARK WEST APARTMENTS, New York, N. Y.**
   General Contractor: Webb & Knapp Construction Co.
   Architect: S. J. Kessler & Sons

GROSSMAN STEEL STAIR CORPORATION

main office and factory: 1190 Longwood Avenue at Tiffany Street, New York 59, New York

steel stairs, miscellaneous and ornamental iron

STEEL STAIRS SINCE 1902

On the basis of patents issued to our founder, in 1902 we built our first flight of pressed steel stairs, our organization then being organized for the purpose of manufacturing steel stairs exclusively. Within five years of that time, steel stairs had replaced cast iron in almost all new buildings in Greater New York and soon thereafter they were in general use throughout the country. In the last 56 years, we have built almost one million flights of stairs.

CONSTRUCTION

Our stairs are built to Architects specifications. They are built as a steel structure is built, with rivets, bolts and strong welds, in accordance with sound engineering practice. Our patents are not for unique methods of assembling stairs, but for the basic machinery and methods of building strong stairs cheaply.

TESTS

In 1908 Prof. Ira Woolson of Columbia University Testing Laboratories tested our stairs and found that they will bear a live load of 400 pounds per square foot with no permanent deflection.

APPROVAL

Our stairs are approved by the Department of Housing and Buildings of the City of New York and have been erected with the approval of local authorities in practically all communities throughout the eastern part of the United States.

NOTES FOR SPECIFICATIONS

The design and layout of steel stairs naturally varies with the conditions under which they are to be used. In the last analysis the choice of specifications lies with the Architect. As an aid to the selection of components of proper strength we present herewith pictorially and in these specifications a variety of such component parts.

stringers

Except in unusual situations stair stringers are made in channel form, the weight of the stair and of the live load determining the size of the channel. The lightest available section is J & L channel weighing 6.5# per lineal foot. This section is suitable for light apartment construction. The J & L channel weighing 8.4# per foot is suitable for almost all types of construction except where the span of the stairs is extraordinarily large or the weights to be carried are extremely heavy. For large and heavy stairs, structural channels of a weight of 15.3# per lineal foot are used.

In general, face stringers are made of the same sections. When it is desired to ornament the stair particularly an applied moulding is secured to the top and bottom flange of the stringer. The practice of returning such mouldings vertically at each end is extremely costly.

carriers

Carriers, also known as horses and pitch blocks, for ordinary stairs, are made of 1¼ x 1¼ x ⅛" angles riveted to the stringer with ¼" rivets. Carriers should be made in one piece and should be properly mitred for neat appearance. If greater strength is required, carriers may be of 1¼ x 1¼ x 3/16" angles.

risers and undertreads

Risers and undertreads for apartment house stairs may be of No. 14 USS gauge. More substantial stairs require No. 12 gauge risers and stairs of unusual width or usage may take ⅛" or No. 10 gauge steel. Risers can be prepared for a variety of finishes, the most common being for cement fill or marble or slate treads.

platforms

Platforms are normally made of the same gauge steel used for risers and undertreads. They may be re-enforced with integral ribs bent therein or with angles or T's secured to the underside thereof.

newels

Except in the circumstances that a particular ornamental design for newels is required, the most satisfactory form is square bent steel tubing with sanitary flush welded caps and drops. Newels may be of 3" or 3½" or 4" square as required or they may be 3" x 6". Wall thickness may be No. 10 gauge or 3/16".

railing

There is no limit to the degree of ornamentation which may be applied to the design of railing. The simplest and most satisfactory type is made of ½" square bars spaced 5" on centers with 1 x ⅜" channels top and bottom, the top channel being either punched to receive a wooden handrail to be supplied by others, or surmounted by 1¼" pipe handrail. Variances of this is to use ⅝" square bars, or to reduce the centers to 4½", or to use alternate twisted bars, or to use ornamental panels.

scissor stairs • concrete stairs

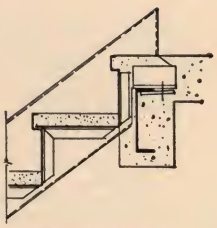
We have been very successful in making stairs in the nature of permanent steel forms for concrete stairs. In this case stringers and risers only are used. Concrete is then cast in wood forms secured to the underside of the stringer up to the level of the top of the riser. This method of construction is more economical than for concrete stairs and is more accurate with reference to riser heights, etc. Also, a riser with a neat nosing is easily secured.

plaster soffits

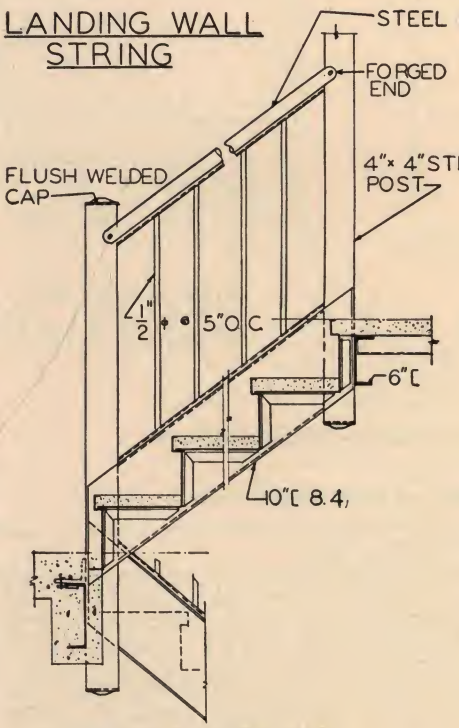
If desired small clips with holes therein may be welded at equal spaces on wall and face stringer so that wire lath may be placed thereon for purpose of plastering the underside of the stair.

While we specialize in steel stairs, we also manufacture and erect all items of ornamental and miscellaneous iron work

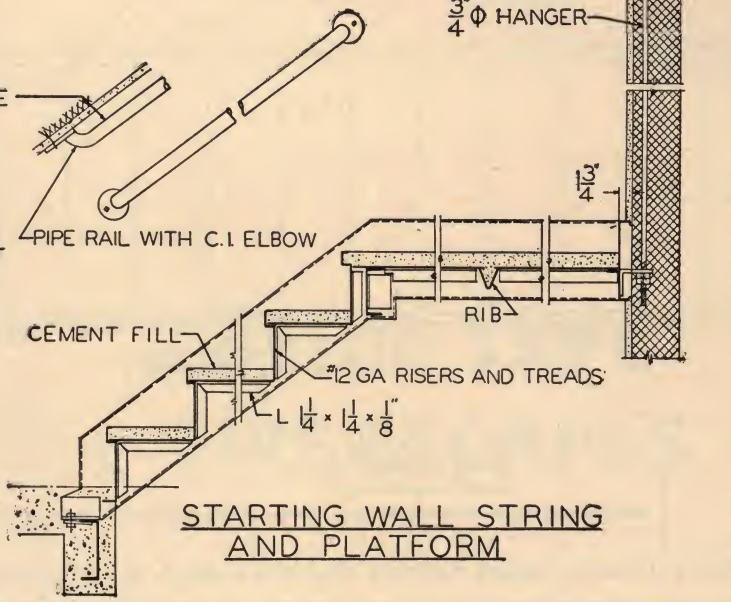
STEEL STAIRS SINCE 1902



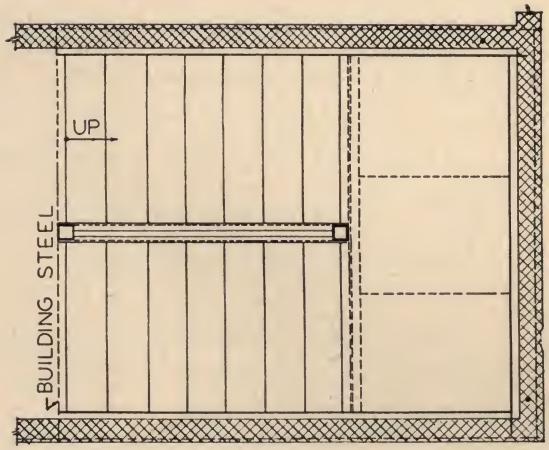
LANDING WALL STRING



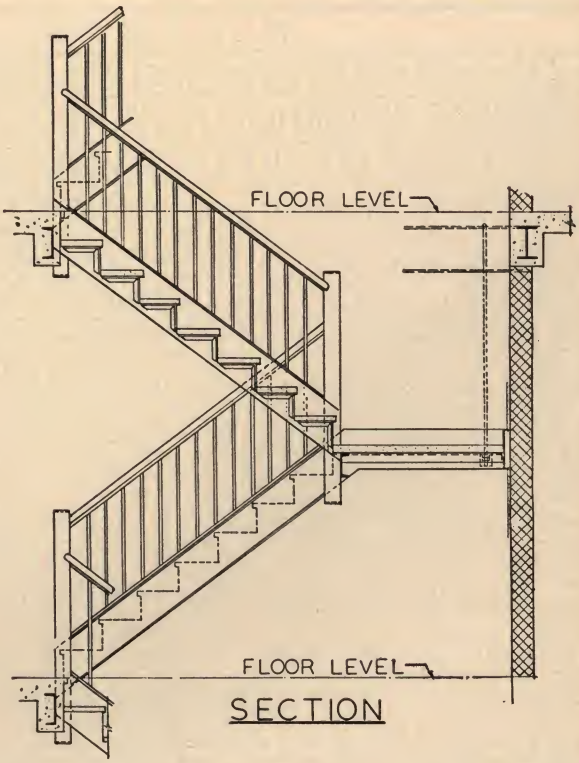
FACE STRING



STARTING WALL STRING AND PLATFORM



PLAN

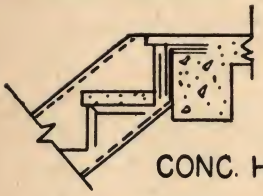


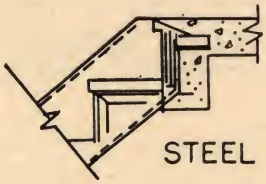
SECTION

THIS LAYOUT IS GENERALLY SUITABLE FOR APARTMENTS, OFFICE, FACTORY OR SIMILAR BUILDING WHERE A CLEAN ECONOMICAL STAIR IS REQUIRED

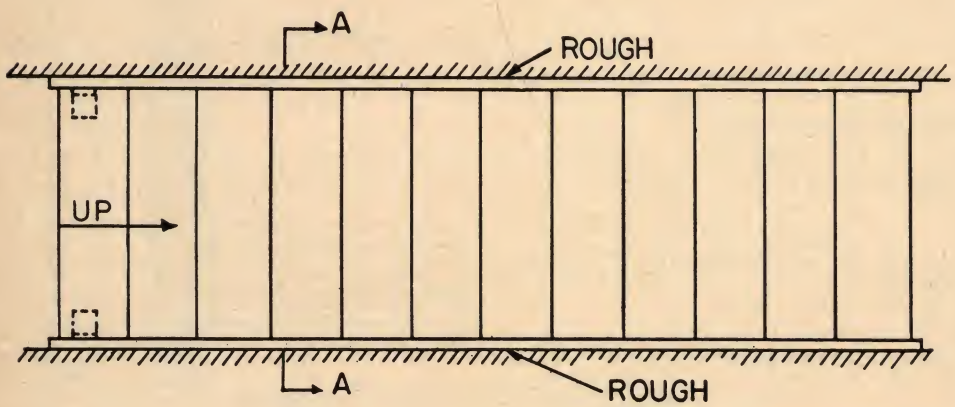
GROSSMAN STEEL STAIR CORP. 1190 LONGWOOD AVENUE BRONX 59, NEW YORK	STANDARD STAIR DETAILS	OFFICE AND APARTMENT BUILDINGS

stairs suitable for low cost housing—type R W



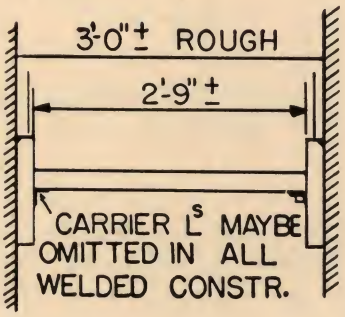


RISER & SUB-TREAD #14 GA. BENT IN ONE PIECE



PLAN

STRINGS - 12"-3/16" PL. BENT TO A 10" [, OR 10" [6.5



SECTION

Table showing story heights derived from a specific number of risers and riser heights.

RISER SCHEDULE

1	6	6 1/16	6 1/8	6 3/16	6 1/4	6 5/16	6 3/8	6 7/16	6 1/2	6 9/16	6 5/8	6 11/16	6 3/4	6 13/16	6 7/8	6 15/16	7	7 1/16	7 1/8	7 3/16	7 1/4	7 5/16	7 3/8	7 7/16	7 1/2	7 9/16	7 5/8	7 11/16	7 3/4	7 13/16
2	1-0	1-0 1/8	1-0 1/4	1-0 3/8	1-0 1/2	1-0 5/8	1-0 3/4	1-0 7/8	1-1	1-1 1/8	1-1 1/4	1-1 3/8	1-1 1/2	1-1 5/8	1-1 3/4	1-1 7/8	1-2	1-2 1/8	1-2 1/4	1-2 3/8	1-2 1/2	1-2 5/8	1-2 3/4	1-2 7/8	1-3	1-3 1/8	1-3 1/4	1-3 3/8	1-3 1/2	1-3 5/8
3	1-6	1-6 3/16	1-6 3/8	1-6 9/16	1-6 3/4	1-6 15/16	1-7 1/8	1-7 5/16	1-7 1/2	1-7 11/16	1-7 7/8	1-8 1/16	1-8 1/4	1-8 7/16	1-8 5/8	1-8 13/16	1-9	1-9 3/16	1-9 3/8	1-9 5/16	1-9 3/4	1-9 15/16	1-10 1/8	1-10 5/16	1-10 1/2	1-10 11/16	1-10 7/8	1-11 1/16	1-11 1/4	1-11 7/16
4	2-0	2-0 1/4	2-0 1/2	2-0 3/4	2-1	2-1 1/4	2-1 1/2	2-1 3/4	2-2	2-2 1/4	2-2 1/2	2-2 3/4	2-3	2-3 1/4	2-3 1/2	2-3 3/4	2-4	2-4 1/4	2-4 1/2	2-4 3/4	2-5	2-5 1/4	2-5 1/2	2-5 3/4	2-6	2-6 1/4	2-6 1/2	2-6 3/4	2-7	2-7 1/4
5	2-6	2-6 5/16	2-6 5/8	2-6 15/16	2-7 1/4	2-7 9/16	2-7 7/8	2-8 3/16	2-8 1/2	2-8 13/16	2-9 1/8	2-9 7/16	2-9 3/4	2-10 1/16	2-10 3/8	2-10 11/16	2-11	2-11 5/16	2-11 5/8	2-11 15/16	3-0 1/4	3-0 9/16	3-0 7/8	3-1 3/16	3-1 1/2	3-1 13/16	3-2 1/8	3-2 7/16	3-2 3/4	3-3 1/16
6	3-0	3-0 3/8	3-0 3/4	3-1 1/8	3-1 1/2	3-1 7/8	3-2 1/4	3-2 5/8	3-3	3-3 3/8	3-3 3/8	3-4 1/8	3-4 1/2	3-4 7/8	3-5 1/4	3-5 5/8	3-6	3-6 3/8	3-6 3/4	3-7 1/8	3-7 1/2	3-7 7/8	3-8 1/4	3-8 5/8	3-9	3-9 3/8	3-9 3/4	3-10 1/8	3-10 1/2	3-10 7/8
7	3-6	3-6 7/16	3-6 7/8	3-7 5/16	3-7 3/4	3-8 3/16	3-8 5/8	3-9 1/16	3-9 1/2	3-9 15/16	3-10 3/8	3-10 13/16	3-11 1/4	3-11 11/16	4-0 1/8	4-0 9/16	4-1	4-1 7/16	4-1 7/8	4-2 5/16	4-2 3/4	4-3 1/16	4-3 5/8	4-4 1/16	4-4 1/2	4-4 15/16	4-5 3/8	4-5 13/16	4-6 1/4	4-6 11/16
8	4-0	4-0 1/2	4-1	4-1 1/2	4-2	4-2 1/2	4-3	4-3 1/2	4-4	4-4 1/2	4-5	4-5 1/2	4-6	4-6 1/2	4-7	4-7 1/2	4-8	4-8 1/2	4-9	4-9 1/2	4-10	4-10 1/2	4-11	4-11 1/2	5-0	5-0 1/2	5-1	5-1 1/2	5-2	5-2 1/2
9	4-6	4-6 9/16	4-7 1/8	4-7 11/16	4-8 1/4	4-8 13/16	4-9 3/8	4-9 15/16	4-10 1/2	4-11 1/16	4-11 5/8	5-0 3/16	5-0 3/4	5-1 5/16	5-1 7/8	5-2 7/16	5-3	5-3 9/16	5-4 1/8	5-4 11/16	5-5 1/4	5-5 13/16	5-6 3/8	5-6 15/16	5-7 1/2	5-8 1/16	5-8 5/8	5-9 3/16	5-9 3/4	5-10 5/16
10	5-0	5-0 5/8	5-1 1/4	5-1 7/8	5-2 1/2	5-3 1/8	5-3 3/4	5-4 3/8	5-5	5-5 5/8	5-6 1/4	5-6 7/8	5-7 1/2	5-8 1/8	5-8 3/4	5-9 3/8	5-10	5-10 5/8	5-11 1/4	5-11 7/8	6-0 1/2	6-1 1/8	6-1 3/4	6-2 3/8	6-3	6-3 5/8	6-4 1/4	6-4 7/8	6-5 1/2	6-6 1/8
11	5-6	5-6 11/16	5-7 3/8	5-8 1/16	5-8 3/4	5-9 7/16	5-10 1/8	5-10 13/16	5-11 1/2	6-0 3/16	6-0 7/8	6-1 9/16	6-2 1/4	6-2 15/16	6-3 5/8	6-4 5/16	6-5	6-5 11/16	6-6 3/8	6-7 1/16	6-7 3/4	6-8 7/16	6-9 1/8	6-9 13/16	6-10 1/2	6-11 3/16	6-11 7/8	7-0 9/16	7-1 1/4	7-1 15/16
12	6-0	6-0 3/4	6-1 1/2	6-2 1/4	6-3	6-3 3/4	6-4 1/2	6-5 1/4	6-6	6-6 3/4	6-7 1/2	6-8 1/4	6-9	6-9 3/4	6-10 1/2	6-11 1/4	7-0	7-0 3/4	7-1 1/2	7-2 1/4	7-3	7-3 3/4	7-4 1/2	7-5 1/4	7-6	7-6 3/4	7-7 1/2	7-8 1/4	7-9	7-9 3/4
13	6-6	6-6 13/16	6-7 5/8	6-8 7/16	6-9 1/4	6-10 1/16	6-10 7/8	6-11 11/16	7-0 1/2	7-1 5/16	7-2 1/8	7-2 15/16	7-3 3/4	7-4 9/16	7-5 3/8	7-6 3/16	7-7	7-7 13/16	7-8 5/8	7-9 7/16	7-10 1/4	7-11 1/16	7-11 7/8	8-0 11/16	8-1 1/2	8-2 5/16	8-3 1/8	8-3 15/16	8-4 3/4	8-5 9/16
14	7-0	7-0 7/8	7-1 3/4	7-2 5/8	7-3 1/2	7-4 3/8	7-5 1/4	7-6 1/8	7-7	7-7 7/8	7-8 3/4	7-9 5/8	7-10 1/2	7-11 3/8	8-0 1/4	8-1 1/8	8-2	8-2 7/8	8-3 3/4	8-4 5/8	8-5 1/2	8-6 3/8	8-7 1/4	8-8 1/8	8-9	8-9 7/8	8-10 3/4	8-11 5/8	9-0 1/2	9-1 3/8
15	7-5	7-6 15/16	7-7 7/8	7-8 13/16	7-9 3/4	7-10 11/16	7-11 5/8	8-0 9/16	8-1 1/2	8-2 9/16	8-3 3/8	8-4 5/16	8-5 1/4	8-6 3/16	8-7 1/8	8-8 1/16	8-9	8-9 15/16	8-10 7/8	8-11 13/16	9-0 3/4	9-1 11/16	9-2 5/8	9-3 9/16	9-4 1/2	9-5 7/16	9-6 3/8	9-7 5/16	9-8 1/4	9-9 3/16
16	8-0	8-1	8-2	8-3	8-4	8-5	8-6	8-7	8-8	8-9	8-10	8-11	9-0	9-1	9-2	9-3	9-4	9-5	9-6	9-7	9-8	9-9	9-10	9-11	10-0	10-1	10-2	10-3	10-4	10-5
17	8-5	8-7 1/16	8-8 1/8	8-9 3/16	8-10 1/4	8-11 5/16	9-0 3/8	9-1 7/16	9-2 1/2	9-3 9/16	9-4 5/8	9-5 11/16	9-6 3/4	9-7 13/16	9-8 7/8	9-9 15/16	9-11	10-0 1/16	10-1 1/8	10-2 3/16	10-3 1/4	10-4 5/16	10-5 3/8	10-6 7/16	10-7 1/2	10-8 9/16	10-9 5/8	10-10 11/16	10-11 3/4	11-0 13/16
18	9-0	9-1 1/8	9-2 1/4	9-3 3/8	9-4 1/2	9-5 5/8	9-6 3/4	9-7 7/8	9-9	9-10 1/8	9-11 1/4	10-0 3/8	10-1 1/2	10-2 5/8	10-3 3/4	10-4 7/8	10-6	10-7 1/8	10-8 1/4	10-9 3/8	10-10 1/2	10-11 5/8	11-0 3/4	11-1 7/8	11-3	11-4 1/8	11-5 1/4	11-6 3/8	11-7 1/2	11-8 5/8